Association Heads Renew the Debate Over Colleges' Negative Image

By SCOTT JASCHIK
WASHINGTON

The leaders of the major higher-education associations are once again debating what to do about the sagging image of colleges and universities. Thus far, answers have eluded them.

For several years now, college officials have bemoaned a deterioration in the way lawmakers and the public view higher education. Rising college costs, athletic scandals, attacks by William J. Bennett when he was Secretary of Education, and allegations of research fraud are among the reasons commonly cited.

Two recent events have renewed the discussion. One was the Justice Department's decision to investigate possible antitrust violations in the way some colleges set tuition rates and award financial aid. The other was the September "Education Summit" with President Bush, at which many governors criticized colleges for caring too much about money.

Concern about those developments prompted the presidents of the major college associations to meet here this month and discuss what they could do about the image problem.

The presidents generally agreed that the problem is real and that it hurts colleges in their dealings with federal and state governments. In addition, the presidents agreed that the solution must come largely from the campuses, not Washington lobbyists.

But they have yet to develop a plan to get individual colleges and universities involved in the process of image improvement. And they are divided on whether to focus on public relations or on making substantive changes in the way colleges operate.

U.S. Inquiry: 'Disastrous'

Both the antitrust investigation and the governors' comments took college officials by surprise. The Justice Department investigation, which now includes at least 56 colleges, has prompted both articles about the high cost of college and critical newspaper editorials about the way private colleges set their tuition rates.

Robert H. Atwell, president of the American Council on Education, said the stories had been "disastrous" for colleges. The problem has been compounded, he said, by lawyers' advising college presidents not to talk about the case, thereby insuring that some of the best arguments on colleges' behalf go unmade.

The Education Summit, which was supposed to provide support for education, turned into a shellacking of colleges and universities. Governors from both political parties portrayed campus leaders as greedy. Oregon's Neil Goldschmidt, a Democrat, said of higher education: "I don't know of any group that more says in response to the questions about quality that the issue is money."

The financial outlook for higher education has made concerns about image all the more important, said several college officials. As federal money becomes ever tighter, they said, interest groups without stellar images are likely to lose out.

"What's really driving the concern is the severe competition for the dollar," said Dale Parnell, president of the American Association of Community and Junior Colleges.

Despite their anxiety over the way the image problem may cost colleges money and trust, the association leaders have had a hard time agreeing on what they should have their member institutions do.

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Mr. Parnell said the issue was basically one of improving communications.

He said the whole issue of college costs and the related antitrust investigation involved a very small sector of higher education—expensive private colleges.

Higher education as a whole should find ways to document and publicize the low costs at the institutions that most students attend, he said.

"We need to get the facts out, basic factual information," he said.

Allan W. Ostar, president of the American Association of State Colleges and Universities, said a similar situation existed in college athletics, where he said abuses at institutions with big-time programs had become "one of the warts" on higher education.

But Mr. Ostar noted that most colleges did not even have big-time programs, let alone major programs with scandals.

Dealing With Fraud

To prevent all colleges from being tarred with the same brush, AASCU recently sent a special letter to the presidents and public-relations officials of its institutions, suggesting that they prepare answers to frequent criticisms of higher education.

On questions of cost, campus crime, and student-loan defaults, the letter provided statistics to back up college claims that the image of higher education is worse than the reality.

Not all college officials agree that public relations will solve the problem.

Robert M. Rosenzweig, president of the Association of American Universities, said: "When you have a set of problems that are real problems, you have to deal with them in real ways. They will only go away if you solve them or demonstrate that you are working as hard as possible at solving them."

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He said colleges should consider the model adopted by the A.A.U. in dealing with questions of science fraud.

The association developed guidelines for universities to use in setting their own policies, and then urged its members to review and improve those policies.

That action, Mr. Rosenzweig said, demonstrated a willingness to redress problems. "It helped persuade people that we were serious," he added.

Mr. Atwell of the A.C.E. said that, on some issues, colleges' image problems reflected real difficulties, while on others, they reflected false impressions that could be changed with better communication.

He said college athletics were a prime example of an area where higher education had been remiss in failing to prevent scandals.

On the other hand, Mr. Atwell said he was very troubled by criticisms that colleges had not responded to calls for improving teacher-education programs and for holding down costs.

He said that in those areas, there was "a chasm" between what he hears from lawmakers and the conditions that he knows exist on campuses.

Mr. Atwell said it was unclear what the higher-education associations would agree to do about the image problem. He said they would continue to meet to try to develop a strategy.

FACT FILE: The Top 100 Institutions in Total Research-and-Development Spending for Fiscal 1988

	U.S. funds for research & development		Total funds for research & development	
	Amount	Rank	Amount	Rank
Johns Hopkins U. *	$509,009,000	1	$557,016,000	1
Stanford U. †	232,572,000	2	277,504,000	2
Cornell U. †	153,662,000	8	271,659,000	3
U. of Wisconsin, Madison	162,384,000	4	271,418,000	4
Massachusetts Inst. of Technology †	210,419,000	3	270,584,000	5
U. of Minnesota	119,789,000	14	252,027,000	6
U. of Michigan	160,854,000	5	250,169,000	7
Texas A&M U.	90,163,000	22	231,161,000	8
U. of California, Los Angeles	146,946,000	9	209,338,000	9
U. of California, San Diego †	159,778,000	7	200,472,000	10
U. of Illinois, Urbana-Champaign	109,633,000	18	197,393,000	11
U. of California, San Francisco	137,747,000	11	193,289,000	12
U. of Washington	160,261,000	6	190,735,000	13
Harvard U.	133,003,000	12	190,429,000	14
Pennsylvania State U.	106,020,000	19	188,444,000	15
U. of California, Berkeley	116,565,000	15	186,372,000	16
U. of Texas, Austin	89,982,000	23	172,608,000	17
Yale U.	132,952,000	13	162,188,000	18
Columbia U.	139,558,000	10	160,976,000	19
U. of Pennsylvania	115,080,000	16	159,218,000	20
U. of Arizona	73,309,000	31	155,464,000	21
U. of California, Davis	63,435,000	36	154,655,000	22
Ohio State U.	69,135,000	33	154,652,000	23
U. of Southern California	112,615,000	17	150,009,000	24
U. of Georgia	39,703,000	66	137,692,000	25
U. of Maryland, College Park	55,365,000	44	135,531,000	26
Georgia Institute of Technology	78,798,000	29	132,051,000	27
U. of Colorado	96,041,000	20	128,015,000	28
Purdue U.	64,163,000	35	118,797,000	29
Washington U.	88,843,000	24	117,829,000	30
Michigan State U.	49,771,000	51	116,320,000	31
North Carolina State U.	34,256,000	75	115,440,000	32
Louisiana State U.	35,578,000	72	114,698,000	33
U. of Rochester †	92,533,000	21	114,061,000	34
Duke U.	86,240,000	25	113,968,000	35
U. of Florida	54,785,000	45	107,177,000	36
U. of North Carolina, Chapel Hill	82,723,000	26	107,039,000	37
Baylor College of Medicine	60,825,000	39	106,814,000	38
Rutgers U.	29,204,000	81	105,150,000	39
Northwestern U.	54,245,000	46	102,755,000	40
U. of Tennessee System	43,108,000	62	101,869,000	41
New York U.	77,746,000	30	100,872,000	42
U. of Pittsburgh	72,462,000	32	98,609,000	43
U. of Chicago †	80,967,000	27	98,541,000	44
Carnegie Mellon U.	63,009,000	37	94,051,000	45
California Institute of Technology †	79,570,000	28	93,351,000	46
U. of Massachusetts	52,139,000	49	93,117,000	47
U. of Iowa	64,370,000	34	93,113,000	48
Virginia Polytechnic Inst. and State U.	33,771,000	76	89,955,000	49
U. of Connecticut	38,953,000	67	89,630,000	50
Oregon State U.	48,877,000	54	88,953,000	51
State U. of New York, Buffalo	60,097,000	40	87,635,000	52
Iowa State U. †	23,306,000	94	86,726,000	53
U. of Alabama, Birmingham	$62,369,000	38	$85,030,000	54
State U. of New York, Stony Brook	54,017,000	47	79,410,000	55
Case Western Reserve U.	59,078,000	41	77,303,000	56
Princeton U.	47,245,000	57	76,891,000	57
U. of Illinois, Chicago	40,260,000	65	75,922,000	58
U. of Utah	57,383,000	43	75,789,000	59
U. of Texas System Cancer Center	27,129,000	85	75,642,000	60
Yeshiva U.	58,823,000	42	75,383,000	61
U. of Virginia	47,482,000	56	74,572,000	62
Indiana U.	52,498,000	48	73,526,000	63
U. of Miami	48,971,000	53	70,783,000	64
U. of Texas Southwestern Medical Center Dallas	48,357,000	55	70,392,000	65
U. of Kentucky	27,724,000	82	69,003,000	66
Rockefeller U.	37,452,000	69	68,588,000	67
U. of Missouri, Columbia	20,170,000	101	66,365,000	68
U. of Hawaii, Manoa	38,560,000	68	64,278,000	69
Boston U.	51,918,000	50	61,505,000	70
New Mexico State U.	43,481,000	61	61,001,000	71
Emory U.	43,668,000	60	60,896,000	72
U. of Nebraska, Lincoln	25,448,000	89	60,788,000	73
Vanderbilt U.	44,646,000	58	60,591,000	74
U. of Cincinnati	35,986,000	71	60,479,000	75
U. of California, Irvine	42,894,000	63	60,100,000	76
Colorado State U.	44,600,000	59	59,369,000	77
Utah State U.	34,763,000	74	59,273,000	78
Woods Hole Oceanographic Institute	49,400,000	52	58,700,000	79
U. of Maryland, Baltimore	33,102,000	77	58,649,000	80
Oklahoma State U.	12,850,000	129	56,636,000	81
Tufts U.	41,953,000	64	54,225,000	82
U. of California, Riverside	16,672,000	112	52,983,000	83
Auburn U.	18,243,000	108	52,737,000	84
U. of Kansas	24,880,000	90	51,723,000	85
Washington State U.	21,361,000	100	51,319,000	86
Florida State U.	24,027,000	92	50,679,000	87
Wayne State U.	22,716,000	97	50,509,000	88
U. of Oklahoma	16,326,000	113	50,047,000	89
City U. of New York, Mount Sinai School of Medicine	32,852,000	78	49,727,000	90
Clemson U.	13,148,000	127	49,375,000	91
U. of California, Santa Barbara	36,205,000	70	46,598,000	92
Mississippi State U.	13,556,000	125	45,005,000	93
Georgetown U.	30,666,000	80	44,783,000	94
U. of New Mexico ‡	24,862,000	91	43,527,000	95
U. of Texas Health Science Center Houston	27,658,000	83	43,345,000	96
Kansas State U.	14,294,000	120	43,174,000	97
Virginia Commonwealth U.	31,150,000	79	42,951,000	98
Tulane U.	23,727,000	93	42,619,000	99
U. of Medicine & Dentistry of New Jersey	21,849,000	99	42,027,000	100
Total, 100 institutions	**$6,892,738,000**		**$11,101,756,000**	
Total, all institutions	**$8,164,801,000**		**$13,422,137,000**	

Note: Figures cover only research-and-development expenditures in science and engineering, and exclude spending in such disciplines as the arts, education, the humanities, law, and physical education.
Because some institutions have developed new methods to report their research expenditures more accurately, comparisons with earlier years may not be appropriate.

* Includes the Applied Physics Laboratory with $364-million in total and $360-million in federally financed research-and-development expenditures.
† Excludes research expenditures at university-associated federally funded research-and-development centers.
‡ Estimate

SOURCE: NATIONAL SCIENCE FOUNDATION

FACT FILE: Additional Tuition and Fee Data for 1989-90

The following table shows tuition and required fees charged to undergraduates at more than 500 colleges and universities for the 1988-89 and 1989-90 academic years, including, for 1989-90, the additional tuition that many public institutions charge to out-of-state students. The figures supplement a table of costs at 2,400 institutions that appeared in *The Chronicle*, August 16.

In addition to listing institutions not previously reported, the table includes corrected figures for San Juan College and the University of Hartford.

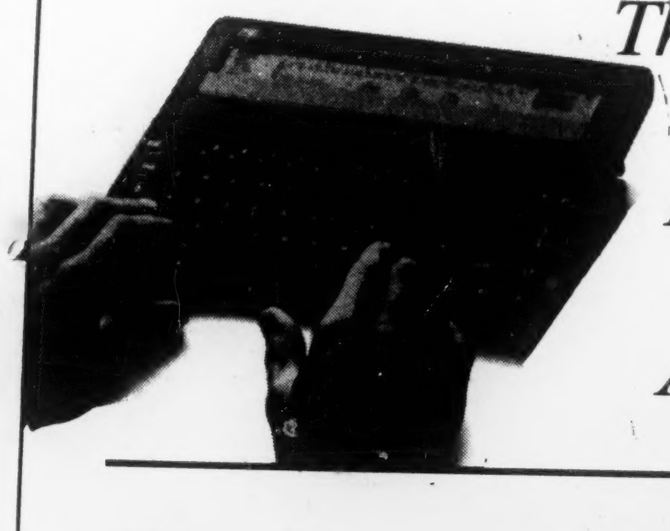
The designation "n/a" indicates that 1988-89 figures are not available.

The figures were collected by the College Board in its Annual Survey of Colleges 1989, and the tuition report was prepared by the board's College Scholarship Service. (Copyright ©1989 by the College Entrance Examination Board. All rights reserved.)

	1988-89	1989-90	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
ALABAMA			
Alabama A&M U	$1,134	$1,248	$988
Concordia C	2,946	3,045	0
Draughons JC	3,150	3,900	0
Faulkner U	3,410	3,540	0
Livingston U	1,263	1,392	0
Marion Military Inst	5,115	5,325	0
Miles C	3,760	3,760	0
National Education Ctr Birmingham	4,650	4,715	0
RETS Electronic Inst	3,120	3,120	0
Selma U	2,100	2,275	0
Southern JC	3,630	3,630	0
Troy St U main campus	1,260	1,320	665
U of Alabama Huntsville	1,758	1,815	1,815
ARIZONA			
Arizona C of the Bible	3,550	3,790	0
DeVry Inst of Tech Phoenix	4,175	4,575	0
Navajo CC	360	360	0
Southwestern C Phoenix	3,750	4,080	0
Western International U	3,300	3,300	0
ARKANSAS			
Arkansas Baptist C	1,670	1,670	0
Capital City JC	4,320	4,320	0
East Ark CC of Business	504	504	336
Garland Co CC	576	576	1,152
North Arkansas CC	528	528	504
Philander Smith C	2,230	2,350	0
Phillips Co CC	528	528	456
Rich Mountain CC	580	580	1,242
Southern Baptist C	2,614	2,776	0
U of Central Arkansas	1,080	1,230	1,200
Westark CC	600	672	888
CALIFORNIA			
Acad of Art C	5,055	6,060	0
Allan Hancock C	119	119	2,820
American Acad of Dramatic Arts West	5,100	6,175	0
American River C	100	100	2,910
Armstrong C	4,063	4,995	0
Barstow C	100	100	2,820
Bethany Bible C	4,650	5,450	0
Cabrillo C	157	157	2,880
California C for Respiratory Therapy	5,700	6,152	0
Cerritos CC	100	100	3,000
Chabot C	100	103	2,880
Coastline CC	100	104	2,850
Coleman C	6,900	7,220	0
C of Alameda	100	104	2,880
C of the Desert	115	115	3,060
C of Marin	106	106	3,030
C of Oceaneering	3,100	7,300	0
Columbia C	115	125	2,820
Condie JC	2,720	4,300	0
Contra Costa CC	102	102	2,730
Cuesta C	130	130	2,820
Cuyamaca C	115	125	2,820
D-Q U	3,030	3,040	0
DeVry Inst of Tech City of Industry	4,175	4,575	0
Diablo Valley C	102	102	2,730
Dominican Sch of Philosophy and Theol	4,365	4,515	0
Dominican C of San Rafael	7,925	8,620	0
Don Bosco Tech Inst	3,110	3,315	0
Edison Tech C	n/a	8,665	0
Fashion Inst of Design and Merchandising	7,630	8,450	150
Fashion Inst of Design and Merchandising SF	n/a	8,150	150
Fullerton C	120	115	3,090
Gavilan CC	112	127	2,820
Golden Gate U	4,142	4,452	0
Grantham C of Engineering	1,800	1,800	0
Hartnell C	100	100	2,820
Heald Business C Rohnert Park	4,950	4,975	0
Heald Business C Sacramento	4,975	4,975	0
Heald Business C San Jose	4,975	4,975	0
Heald Inst of Tech	4,975	4,975	0
Heald 4C's Business C	4,975	4,975	0
Irvine Valley C	115	115	2,820
ITT Tech Inst Buena Park	$4,723	$6,475	$0
Kings River CC	115	115	2,820
Lake Tahoe CC	100	106	3,960
Laney C	100	104	2,880
Lassen C	100	100	2,820
Los Angeles Southwest C	100	100	3,060
Los Medanos C	100	102	2,730
Louise Salinger Acad of Fashion	12,825	13,275	0
Merritt C	100	104	2,880
Palo Verde C	100	100	1,170
Pasadena City C	115	115	2,850
Rio Hondo C	100	115	2,700
Saint John's Seminary C	3,435	3,639	0
Saint Joseph's C	4,500	5,175	0
San Bernardino Valley C	115	115	2,820
San Diego City C	100	115	2,790
San Francisco Art Inst	8,360	9,200	0
Shasta C	126	126	2,790
Solano CC	108	108	2,850
S Cal Inst of Architecture	8,060	8,660	0
U of West Los Angeles	5,055	5,505	0
Ventura C	100	115	2,820
Vista C	100	100	2,880
West Los Angeles C	100	100	3,060
Yeshiva Ohr Elchonon Chabad West Coast Talmudical Sem	2,700	3,000	0
COLORADO			
Aims CC	627	627	2,988
Blair JC	3,030	4,130	0
Colorado Inst of Art	5,850	6,375	0
Colorado St U	1,897	2,096	4,012
Denver Inst of Tech	9,295	12,395	0
Mesa St C	1,268	1,328	2,148
Metropolitan St C	1,158	1,218	3,188
Nazarene Bible C	2,048	2,110	0
U of Northern Colorado	1,636	1,726	2,736
Western St C	1,454	1,480	2,757
CONNECTICUT			
Holy Apostles C and Sem	3,000	3,000	0
Sacred Heart U	6,600	7,220	0
Saint Basil's C	5,090	5,105	0
U of Hartford	10,000	10,992	0
DISTRICT OF COLUMBIA			
Strayer C	3,540	4,050	0
FLORIDA			
Art Inst of Fort Lauderdale	6,150	6,675	0
Brevard CC	720	720	720
Daytona Beach CC	699	699	801
Florida CC Jacksonville	720	721	713
Fort Lauderdale C	4,440	4,440	0
Jacksonville	675	743	795
Hillsborough CC	600	600	600
Indian River CC	2,610	2,700	0
Jones C	4,600	4,750	0
National Ed Ctr Bauder C	5,382	6,204	0
National Education Ctr Tampa Tech Inst	720	751	750
Pasco-Hernando CC	4,490	4,695	0
Phillips JC	660	721	810
Polk CC	690	800	704
Seminole CC	2,340	2,640	0
Southeastern C of the Assemblies of God	4,500	4,500	0
Talmudic C of Florida	4,800	5,100	0
United Electronics Inst of Florida	698	758	848
Valencia CC			
GEORGIA			
Bauder Fashion C	5,395	5,595	0
Crandall JC	3,394	3,825	0
DeKalb Tech Inst	n/a	435	360
DeVry Inst of Tech Decatur	4,175	4,575	0
Meadows C of Business	2,595	2,670	0
Phillips JC	2,700	2,880	0
Reinhardt C	3,120	3,390	0
IDAHO			
C of Southern Idaho	800	800	1,000
North Idaho C	760	760	1,150
ILLINOIS			
American Acad of Art	5,360	5,900	0
Brisk Rabbinical C	2,100	2,100	0
Carl Sandburg C	825	855	4,884
C of Automation	5,325	5,325	0
Danville Area CC	810	810	3,103
DeVry Inst of Tech Chicago	4,175	4,575	0
DeVry Inst of Tech Lombard	4,175	4,575	0
Harrington Inst of Interior Design	6,450	6,960	0
John Wood CC	870	870	3,377
Joliet JC	690	690	2,889
Kaskaskia C	787	788	3,165
Lake Land C	1,036	1,044	3,175
Mennonite C of Nursing	5,811	6,159	0
Midstate C	3,515	3,700	0
NAES C	3,350	3,350	0
Parkland C	885	975	4,050
Rend Lake C	690	690	3,272
Shawnee CC	710	710	2,116
Shimer C	7,750	8,150	0
Southeastern Illinois C	630	630	2,003
State CC East St Louis	924	924	3,990
Trinity C	6,830	7,300	0
U of Health Sciences Chicago Medical Sch	6,072	10,000	0
VanderCook C Music	6,600	7,545	0
INDIANA			
George Rogers Clark C	n/a	5,010	0
Indiana St U	1,874	1,992	2,734
International Business C	6,100	6,990	0
Lockyear C	2,615	2,850	0
IOWA			
Emmaus Bible C	1,630	1,630	0
Grand View C	5,320	5,820	0
Iowa Lakes CC	1,170	1,222	546
Marshalltown CC	1,210	1,235	1,150
Southwestern CC	1,140	1,140	503
Western Iowa Tech CC	923	1,025	975
KANSAS			
Benedictine C	$5,800	$6,640	$0
Cowley Co CC	570	630	1,230
Dodge City CC	690	738	1,122
Garden City CC	680	707	1,110
Haskell Indian JC	090	090	0
Independence CC	570	630	1,230
Johnson Co CC	765	840	1,965
Neosho Co CC	530	530	1,200
KENTUCKY			
Elizabethtown CC	580	600	1,200
Franklin C	3,725	3,725	0
Inst of Electronic Tech	3,945	4,445	0
Kentucky C of Business	3,240	3,240	0
Kentucky Christian C	2,648	2,806	0
National Ed Ctr Ky C of Tech	4,495	5,838	0
Sullivan JC of Business	4,995	5,400	0
Watterson C	4,420	5,020	0
LOUISIANA			
Delgado CC	980	980	1,200
Grambling St U	1,508	1,766	1,550
Louisiana St U Shreveport	1,320	1,460	2,190
Louisiana St U & A&M C	1,837	2,014	3,200
McNeese St U	1,396	1,569	1,350
Northeast Louisiana U	1,413	1,603	1,140
Phillips JC	3,742	3,742	0
Southern U A&M C	1,354	1,488	1,860
Southern U New Orleans	1,372	1,452	1,558
St Bernard Parish CC	210	210	0
U of New Orleans	1,666	1,886	2,692
U of Southwestern La	1,323	1,515	1,750
MAINE			
Beal C	3,104	3,725	0
Kennebec Valley Tech C	938	1,038	1,000
Northern Maine Tech C	1,050	1,150	1,000
U of Maine	1,936	2,092	3,330
MARYLAND			
Allegany CC	1,152	1,160	1,500
Catonsville CC	978	1,080	2,292
Frederick CC	1,203	1,283	3,420
Garrett CC	840	900	2,160
Hagerstown JC	1,078	1,176	1,470
Md C of Art and Design	5,227	5,466	0
Ner Israel Rabbinical C	2,700	2,700	0
Washington Bible C	4,228	4,729	0
MASSACHUSETTS			
Dean JC	7,235	7,735	0
Katharine Gibbs Sch	6,795	7,095	0
Sch of the Museum of Fine Arts Boston	8,435	9,365	0
MICHIGAN			
Central Michigan U	1,850	1,945	2,850
Charles S Mott CC	1,050	1,150	960
Davenport C of Business	4,955	6,476	0
Delta C	1,113	1,210	1,440
Eastern Michigan U	1,764	1,913	2,708
Ferris St U	1,995	2,238	2,301
Grand Rapids JC	1,130	1,130	990
Grand Valley St U	1,794	2,016	2,616
Jackson CC	1,050	1,110	540
Lewis C of Business	4,100	4,400	0
Mercy C of Detroit	5,750	6,060	0
Michigan St U	3,090	3,285	4,470
Monroe Co CC	630	690	330
Nazareth C	6,570	7,156	0
North Central Michigan C	975	1,097	270
Oakland CC	1,040	1,100	1,590
Sacred Heart Major Sem	2,750	2,920	0
Saginaw Valley St U	1,995	2,063	2,160
Suomi C	8,300	6,900	0
U of Michigan Ann Arbor	3,081	3,288	7,728
Dearborn	2,324	2,386	5,204
Flint	1,954	2,104	4,756
Walsh C of Accountancy and Business Admin	3,290	3,590	0
Wayne Co CC	1,014	1,014	900
MINNESOTA			
Medical Inst of Minnesota	4,260	4,800	0
Minnesota Bible C	2,550	2,700	0
Northwest Tech Inst	4,705	4,945	0
Saint Paul Tech Inst	1,335	1,425	1,395
MISSISSIPPI			
Coahoma CC	700	700	1,400
East Mississippi JC	670	760	1,000
Holmes CC	710	710	1,000
Itawamba CC	600	665	795
Mississippi Gulf Coast CC Jefferson Davis	660	660	900
Mississippi Gulf Coast CC Jackson Co	660	660	900
Mississippi Gulf Coast CC Perkinston	660	660	900
Phillips JC	3,025	3,240	0
William Carey C	3,550	3,550	0
Wood JC	1,680	1,890	0
MISSOURI			
Basic Inst of Tech	4,075	5,175	0
Conception Seminary C	4,160	4,160	0
Deaconess C of Nursing	4,580	4,910	0
DeVry Inst of Tech	4,175	4,575	0
East Central C	600	612	660
Maple Woods CC	810	810	1,140
Moberly Area JC	510	570	1,710
Park C	5,500	5,700	0
Penn Valley CC	810	810	1,140
St Louis CC Forest Park	855	930	630
Three Rivers CC	630	630	780
MONTANA			
Blackfeet CC	1,281	1,281	0
Little Big Horn C	975	975	0
Salish Kootenai C	1,083	1,296	0
NEBRASKA			
Grace C of the Bible	$3,264	$3,264	$0
McCook CC	764	857	162
Nebraska Indian CC	968	1,370	0
Western Nebraska CC	825	915	030
NEW HAMPSHIRE			
Daniel Webster C	8,476	9,096	0
NEW JERSEY			
Beth Medrash Govoha	2,800	2,800	0
Caldwell C	6,338	6,838	0
Cumberland Co C	1,060	1,130	2,970
Essex Co C	1,170	1,553	2,700
Gloucester Co C	1,140	1,200	3,120
Hudson Co CC	1,120	1,150	990
Kean C of New Jersey	1,756	1,950	690
Middlesex Co C	1,013	1,085	2,880
New Jersey Inst of Tech	3,220	3,560	3,060
Ocean Co C	1,081	1,081	940
Union Co C	950	1,152	2,970
NEW MEXICO			
Eastern New Mexico U Roswell	550	580	960
New Mexico St U Alamogordo	528	552	1,224
Grants	528	552	1,080
Parks C	3,695	3,695	0
San Juan C	360	360	240
NEW YORK			
Belzer Yeshiva Machzikei Torah Seminary	2,350	2,350	0
Berkeley Sch Long Island	6,300	6,705	0
Berkeley Sch New York City	6,675	7,455	0
Beth Hatalmud Rabbinical C	2,900	2,900	0
Beth Jacob Hebrew Teachers C	2,950	3,210	0
Beth Medrash Emek Halacha Rabbinical C	2,600	2,600	0
Bnos Jerusalem Seminary	2,350	2,350	0
Boricua C	4,228	4,528	0
Bryant & Stratton Business Inst Buffalo	4,176	4,416	0
Catholic Med Ctr Sch of Nursing	2,780	3,000	0
Central Yeshiva Tomchei Tmimim Lubavitz of the USA	4,200	4,300	0
Cochran Sch of Nursing	6,765	7,125	0
CC of the Finger Lakes	1,470	1,470	1,350
Darkei Noam Rabbinical C	3,400	3,600	0
Dowling C	5,805	6,440	0
Erie CC City	1,410	1,410	1,350
Erie CC South	1,395	1,395	1,350
Fulton-Montgomery CC	1,445	1,445	1,350
Holy Trinity Orthodox Sem	800	900	0
Inst of Design and Construction	2,460	2,740	0
Jefferson CC	1,473	1,491	1,350
Katharine Gibbs Sch Melville	6,545	6,845	0
Katharine Gibbs Sch New York	6,545	6,845	0
Kehilath Yakov Rabbinical Sem	3,900	3,900	0
Kol Yaakov Torah Ctr	2,800	2,800	0
Long Island U Brooklyn	7,355	7,750	0
Machzikei Hadath Rabbinical C	4,000	4,200	0
Mesivta Eastern Parkway Rabbinical Sem	3,600	3,600	0
Mesivta Tifereth Jerusalem of America	2,900	3,000	0
Mesivta Torah Vodaath Sem	3,965	4,315	0
Mirrer Yeshiva Central Inst	2,000	2,250	0
Molloy C	6,500	7,000	0
Monroe CC	1,437	1,437	1,350
Orange Co CC	1,435	1,435	1,350
Plaza Business Inst	4,330	4,330	0
Rabbinical Acad Mesivta Rabbi Chaim Berlin	3,700	4,000	0
Rabbinical C Beth Shraga	2,350	2,400	0
Rabbinical C Ch'san Sofer of NY	3,600	4,200	0
Rabbinical C of Long Island	5,250	6,300	0
Rabbinical Seminary Adas Yereim	3,500	3,500	0
Rabbinical Sem of America	3,000	3,000	0
Rabbinical Seminary M'Kor Chaim	3,600	3,600	0
Rika Breuer Teachers Sem	1,570	1,600	0
Rochester Business Inst	3,710	4,740	0
Saint Francis C	4,920	5,250	0
Schenectady Co CC	1,453	1,453	1,350
St U of New York C at Oneonta	1,550	1,550	3,350
Sullivan Co CC	1,430	1,486	1,350
Talmudical Inst of Upstate New York	2,200	3,500	0
Talmudical Seminary Oholei Torah	4,000	4,000	0
Tobe-Coburn Sch of Fashion Careers	7,950	7,950	0
Tompkins-Cortland CC	1,440	1,455	1,350
United Talmudical Acad	2,800	2,800	0
Villa Maria C of Buffalo	4,240	4,550	0
Westchester Business Inst	6,405	6,930	0
Wood Sch	6,535	6,925	0
Yeshiva Derech Chaim	n/a	3,500	0
Yeshiva Gedolath Zichron Moshe	3,800	3,800	0
Yeshiva Karlin Stolin Beth Aaron	2,750	2,750	0
Yeshiva of Nitra Rabbinical C	3,000	3,000	0
Yeshiva Ohel Shmuel	2,500	2,500	0
NORTH CAROLINA			
Bladen CC	246	291	2,250
Blanton's JC	2,585	4,025	0
Blue Ridge CC	241	295	2,250
Caldwell CC and Tech Inst	240	285	2,250
Davidson Co CC	248	293	2,250
Fayetteville Tech CC	234	279	2,250
Forsyth Tech CC	240	285	2,250
Halifax CC	246	291	2,250
Hardbarger JC of Business	3,622	3,995	0
Mitchell CC	$252	$297	$2,250
Piedmont Bible C	2,890	2,980	0
Pitt CC	243	288	2,250
Randolph CC	247	292	2,250
Roanoke-Chowan CC	243	294	2,250
Robeson CC	240	285	2,250
Rowan-Cabarrus CC	246	294	2,250
Rutledge C Charlotte	3,895	3,895	0
Rutledge C Fayetteville	3,895	3,895	0
Rutledge C Greensboro	3,895	3,895	0
Rutledge C Raleigh	3,895	3,895	0
Rutledge C Winston-Salem	3,895	3,895	0
Sandhills CC	249	294	2,250
Shaw U	4,355	4,450	0
Surry CC	243	288	2,250
Tri-County CC	238	283	2,250
U of NC Central Office			
Asheville	838	940	3,842
Chapel Hill	876	1,018	4,502
Charlotte	821	921	4,372
Greensboro	1,053	1,303	4,502
Wilmington	953	1,068	4,372
Appalachian St U	968	1,100	4,372
East Carolina U	878	978	4,372
Elizabeth City St U	972	1,006	3,842
Fayetteville St U	962	954	4,372
North Carolina St U	922	1,050	4,502
NC A&T St U	899	1,007	4,372
NC Central U	894	988	4,372
Pembroke St U	716	800	3,842
Western Carolina U	986	1,032	4,372
Vance-Granville CC	246	291	2,250
Wilson Tech CC	240	285	2,250
NORTH DAKOTA			
Fort Bethold CC	1,300	1,340	0
Little Hoop CC	1,400	1,400	0
Standing Rock CC	1,570	1,570	0
Turtle Mountain CC	936	936	0
OHIO			
Bliss C	3,850	4,150	0
Bowling Green St U Firelands	1,912	2,042	3,160
Bradford Sch	6,050	6,490	0
Bryant and Stratton Business Inst	3,915	4,140	0
Cincinnati Bible C and Sem	2,670	2,910	0
Cincinnati Metropolitan C	3,797	3,875	0
Cleveland St U	2,277	2,397	2,397
Davis JC of Business	3,771	4,225	0
DeVry Inst of Tech	4,175	4,575	0
Lakeland CC	1,294	1,395	1,935
Lima Tech C	1,350	1,500	1,512
Lorain Co CC	1,350	1,440	2,745
Marion Tech C	1,404	1,476	1,584
Miami U Hamilton	2,206	2,336	3,790
Miami U Middletown	2,206	2,336	3,790
Muskingum Area Tech C	1,587	1,674	1,350
North Central Tech C	1,665	1,800	1,800
Ohio U Belmont	1,941	2,070	2,859
Chillicothe	1,941	2,070	2,859
Ironton	1,797	1,914	90
Lancaster	1,941	2,070	2,859
Zanesville	1,941	2,070	2,859
Rabbinical C of Telshe	n/a	1,610	0
RETS Inst of Tech	3,880	4,932	0
Sinclair CC	1,215	1,305	1,350
Southern Ohio C	4,400	4,900	0
Southern St CC	1,723	1,769	1,521
Terra Tech C	1,221	1,575	2,160
Union Inst	4,975	5,175	0
Washington Tech C	1,377	1,485	1,395
Wright St U Lake	1,905	2,025	2,244
OKLAHOMA			
Carl Albert JC	739	849	1,478
Flaming Rainbow U	3,230	3,400	0
Langston U	1,093	1,233	1,757
Mid-America Bible C	3,632	3,872	0
Murray SC	750	879	1,478
Northeastern Okla A&M C	720	819	1,478
Northeastern St U	1,020	1,190	1,757
Northern Oklahoma C	705	804	1,478
Oklahoma City CC	765	864	1,478
Rogers St C	780	903	1,478
Seminole JC	780	894	1,478
Southeastern Okla St U	1,020	1,175	1,757
Southwestern C of Christian Ministries	2,634	2,910	0
Tulsa JC	765	864	1,478
Western Oklahoma St C	720	819	1,478
OREGON			
Blue Mountain CC	648	855	1,845
Columbia Christian C	4,846	5,095	0
Concordia C	6,585	7,050	0
Mount Angel Seminary	3,030	3,030	0
Multnomah Sch of the Bible	4,350	4,650	0
Oregon Health Sciences U	2,382	2,643	3,261
Portland St U	1,590	1,755	2,261
Southwestern Oregon CC	720	755	1,518
Western Oregon St C	1,569	1,686	2,790
PENNSYLVANIA			
American Inst of Design	5,350	5,350	0
Berean Inst	2,560	2,560	0
Combs C of Music	5,700	5,700	0
Drexel U	8,916	9,551	0
DuBois Business C	3,850	3,850	0
Electronic Inst Middletown	3,670	3,670	0
Electronic Inst Pittsburgh	n/a	5,430	0
Erie Business Ctr	3,880	5,250	0
Hahnemann U	6,100	6,460	0
Lackawanna JC	3,720	4,260	0
Lincoln Tech Inst	4,300	4,600	0
Luzerne Co CC	1,320	1,440	2,640
McCarrie Sch of Health Sciences and Tech	3,508	3,950	0
National Ed Ctr Vale Tech Inst	6,048	6,379	0
Penn Tech Inst	4,880	5,330	0
Pennco Tech	4,800	4,800	0
Reading Area CC	1,320	1,380	2,640
St Charles Borromeo Sem	3,550	4,000	0

Continued on Page A42

THE AFFORDABLE PORTABLE



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Female Engineering Students Describe a Lack of Support

NEW YORK

Many universities are taking steps to lure more women to their engineering schools. But in a new survey, female students describe their high-school counselors as unsupportive of their decisions to study engineering and complain that they have few female role models in college.

The survey of 1,945 female undergraduates who are members of the Society of Women Engineers was completed last spring by the Cooper Union, an institution with schools of engineering, art, and architecture.

Only 43 per cent of the women said their high-school counselors had applauded their decisions to pursue engineering. Although 87 per cent of the students described their college environment as supportive or somewhat supportive, just 18 per cent said they knew a sympathetic engineering faculty member with whom they could talk about a problem.

About 80 per cent of the students said they wished more of their college professors were females. But only 6 per cent of the undergraduate women said they planned to pursue academic careers themselves.

Fear of Harassment

Those questioned also said they felt intimidated by male students in their college classes, and they expressed concern that they would face sexual harassment in their jobs.

"The lack of support many young women still feel for choosing a career in engineering remains a major and frustrating issue," said Eleanor Baum, the dean of Cooper Union's Albert Nerken School of Engineering, who directed the survey. "We in education and in the profession must enlighten guidance counselors and teachers on both the high-school and college levels so they encourage young women."

—ROBIN WILSON

FACT FILE: Additional Tuition and Fee Data

	1988-89	1989-90	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
PENNSYLVANIA—Continued			
Talmudical Yeshiva of Philadelphia	$3,050	$3,050	$0
Triangle Tech Pittsburgh	4,896	5,453	0
U of Pittsburgh			
Main campus	3,836	4,086	4,020
Bradford	3,810	4,060	4,020
Johnstown	3,780	4,030	4,020
Titusville	3,690	3,940	3,860
United Wesleyan C	5,090	5,370	0
Valley Forge Christian C	2,600	3,200	0
Williamson Free Sch of Mechanical Trades	200	215	0
Williamsport Area CC	1,692	3,867	2,046
SOUTH CAROLINA			
Aiken Tech C	600	600	285
Allen U	3,330	3,480	0
Chesterfield-Marlboro Tech C	720	720	400
Claflin C	3,568	3,768	0
Clinton JC	1,175	1,220	0
Columbia JC of Business	2,145	2,145	0
Horry-Georgtown Tech C	600	675	675
Lander C	1,970	2,130	900
Midlands Tech C	750	750	750
Nielsen Electronics Inst	2,700	2,700	0
Orangeburg-Calhoun Tech C	600	600	300
Rutledge C Columbia	3,895	3,895	0
Rutledge C Greenville	3,890	3,895	0
Rutledge C N Charlotte	3,895	3,895	0
Tech C of the Lowcountry	675	750	330
Trident Tech C	734	735	708
Voorhees C	3,053	3,150	0
Winthrop C	2,070	2,326	1,802
SOUTH DAKOTA			
Kilian CC	3,150	3,299	0
Oglala Lakota C	870	1,550	0
Sinte Gleska C	1,580	1,580	0
TENNESSEE			
American Baptist C of ABT Sem	1,650	1,775	0
Aquinas JC	2,660	2,940	0
Bethel C	3,600	3,900	0
Bristol U	3,600	4,500	0
Cooper Inst	2,710	3,030	0
Cumberland U	4,010	4,185	0
Draughons JC Knoxville	3,600	4,196	0
Draughons JC Memphis	n/a	4,196	0
John A Gupton C	2,964	3,267	0
Knoxville Business C	2,790	3,600	0
Lane C	3,704	4,000	0
McKenzie C	3,480	3,530	0
Rutledge C	3,895	3,895	0
TEXAS			
Brazosport C	186	186	370
Central Texas C	300	408	870
Cisco JC	540	530	400
Clarendon C	410	410	400
Corpus Christi St U	840	910	3,120
Dallas Baptist U	4,540	4,620	0
DeVry Inst of Tech	4,175	4,575	0
East Texas St U Texarkana	780	840	3,120
El Paso CC	532	532	1,372
Grayson Co C	480	510	1,200
Hill C	525	525	520
Howard C	468	468	500
Howard Payne U	3,520	3,740	0
Inst for Christian Studies	n/a	615	0
Jarvis Christian C	3,720	3,720	0
Laredo JC	484	570	585
McLennan CC	432	460	1,980
Odessa C	400	457	273
Palo Alto C	n/a	500	780

	1988-89	1989-90	
	Tuition and fees	Tuition and fees	Added out-of-state tuition
TEXAS—Continued			
Panola JC	$250	$280	$220
Paris JC	500	560	540
Ranger JC	540	540	240
San Jacinto C Central	310	310	960
South Plains C	478	484	600
Southwest Texas JC	530	534	1,560
Southwestern Christian C	2,770	3,028	0
Sul Ross St U	880	984	3,120
Tarleton St U	896	1,046	3,120
Texarkana C	480	480	440
Texas Southern U	870	944	3,120
Texas Southmost C	662	662	1,710
Texas St Tech Inst			
Amarillo	545	590	3,240
Harlingen	545	590	3,240
Sweetwater	545	702	3,240
Waco	545	590	3,240
U of North Texas	912	1,024	3,120
West Texas St U	892	1,010	3,120
UTAH			
Snow C	921	972	1,626
Stevens-Henager C	5,490	6,170	0
Utah St U	1,374	1,488	2,631
Utah Valley CC	1,095	1,167	2,046
Weber St C	1,200	1,308	2,205
VERMONT			
Johnson St C	2,620	2,942	3,048
WEST VIRGINIA			
Fairmont St C	970	1,190	1,790
Glenville St C	974	1,150	1,750
Huntington JC of Business	2,700	2,970	0
Southern West Virginia CC	624	774	1,614
WISCONSIN			
Columbia C of Nursing	8,600	9,360	0
Stratton C	4,800	4,800	0
U of Wisconsin			
Eau Claire	1,641	1,668	3,361
Milwaukee	1,915	2,053	4,133
Parkside	1,594	1,697	3,361
River Falls	1,587	1,694	3,361
Stevens Point	1,606	1,721	3,361
Ctr Barron Co	1,410	1,418	2,880
Ctr Marinette	1,365	1,365	2,880
Ctr Marshfield-Wood Co	1,378	1,396	2,880
Ctr Richland	1,456	1,463	2,880
Ctr Sheboygan Co	1,353	1,359	2,880
Ctr Washington Co	1,371	1,383	2,880
Wis Sch of Electronics	4,750	4,920	0
PUERTO RICO			
American U of Puerto Rico	1,900	2,000	0
Antillian C	2,260	2,310	0
Bayamon Central U	1,930	2,200	0
Caguas City C	2,727	2,550	0
Electronic Data Processing C of PR	2,169	2,529	0
Huertas JC	2,550	2,775	0
Inst Tecnico Comercial JC	2,100	2,380	0
Inter American U of PR			
Arecibo	2,370	2,370	0
Metropolitan	2,370	2,400	0
Inst Comercial of PR JC	2,343	2,343	0
Puerto Rico JC	2,344	2,380	0
Ramirez C of Business and Tech	2,550	2,550	0
Tech C of Municipality of San Juan	20	20	0
U Metropolitana	2,050	2,350	0
U of Puerto Rico			
Aguadilla	340	341	0
La Montana	340	343	0
Med Sciences	565	676	0
U of the Sacred Heart	1,970	2,530	0